CLAIMS

Accordingly what is claimed is:

1. A novel system for removing particulate matter from a contaminated fluid source, said system comprising:

a filter tank having an inlet and an outlet, said inlet adapted to receive a stream of contaminated fluid from the source and deliver said stream to said tank, said inlet being disposed substantially tangentially relative to said filter tank;

a cylindrically shaped filter frame operatively mounted within said tank and operatively interposed between said inlet and said outlet;

a mesh filter screen mounted to said filter frame and circumscribed thereabout to define a cylindrical filter assembly therewith, said filter assembly coacting with said filter tank to define an annulus about said filter frame, said annulus coacting with said inlet to direct said stream of contaminated fluid tangentially of and through said filter screen;

a filter cleaning assembly for spraying cleaning fluid through said filter screen, said filter cleaning assembly having an upstanding central pipe disposed within said filter frame in coaxial relationship thereto, said pipe having a plurality of discrete

nozzles mounted thereupon in axially spaced relationship to each other and at a plurality of radial angles such that said cleaning fluid may simultaneously be sprayed at a plurality of radial angles against said filter screens;

means for selectively reciprocating and rotating said pipe;

a storage tank operatively connected to said filter tank and adapted to receive and hold a flow of filtered fluid from said outlet;

pump means operatively interposed between said storage tank and said central pipe and selectively actuatable to deliver said cleaning fluid from said storage tank to said central pipe and through said nozzles into and through said filter screen.

2. A system according to claim 1 in which said stream of contaminated fluid flows at a rate of 1000 gallons per minute.

3. A system according to claim 1 in which said pump means delivers fluid to said central pipe at a rate of 50-80 gallons per minute.

4. A system according to claim 2 in which said pump means delivers fluid to said central pipe at a rate of 50-80 gallons per minute.

5. A system according to claim 1 in which a second pump means is operatively interposed between said contaminated fluid source and said inlet and selectively actuatable to deliver contaminated fluid from said source to said inlet.

6. A system according to claim 1 in which said filter frame comprises a plurality of spaced generally parallel ring members disposed about a common central axis and a plurality of elongated slat members, each of said slat members being mounted to the perimeter of said rings in spaced generally parallel relationship to each other.

7. A filter system comprising:

an upright cylindrical filter tank means having an inlet means, a filtrate outlet means; a cylindrical filter means disposed in coaxial relationship within said filter tank means to separate said inlet means from said filtrate outlet means, said inlet means begin disposed in substantially tangential relationship with said filter means; and a backwash means.

8. A filter system according to claim 7 in which

said backwash means comprises a cylindrical nozzle bearing standpipe disposed in cylindrically upright relationship within said filter means and having a plurality of nozzles attached thereto; said cylindrical nozzle bearing standpipe being rotatable about its central cylindrical axis and reciprocable along said central cylindrical axis.

9. A filter system according to claim 7 in which

said backwash means comprises a plurality of upstanding standpipes disposed within said

filter means, each of said standpipes having a plurality of lateral extensions in each of which is a nozzle assembly having a rotatable nozzle for spraying the interior of said filter means.

10. A filter system according to claim 9 in which said nozzle assembly comprises a pop-up rotatable nozzle for spraying the interior of said filter means.

11. A novel system for removing particulate matter from a contaminated fluid source, said system comprising:

a filter tank having an inlet and an outlet, said inlet adapted to receive a stream of contaminated fluid from the source and deliver said stream to said tank, said inlet being disposed substantially tangentially relative to said filter tank;

a cylindrically shaped filter frame operatively mounted within said tank and operatively interposed between said inlet and said outlet;

a mesh filter screen mounted to said filter frame and circumscribed thereabout to define a cylindrical filter assembly therewith, said filter assembly coacting with said filter tank to define an annulus about said filter frame, said annulus coacting with said inlet to direct said stream of contaminated fluid tangentially of and through said filter screen;

a filter cleaning assembly for spraying cleaning fluid through said filter screen, said filter cleaning assembly having a plurality of upstanding standpipes disposed within said filter frame, said plurality of said standpipes having a plurality of discrete nozzles mounted thereupon in axially spaced relationship to each other and at a plurality of radial angles such that said cleaning fluid may simultaneously be sprayed at a plurality of radial angles against said filter screens;

means for selectively reciprocating and rotating said nozzles;

a storage tank operatively connected to said filter tank and adapted to receive and hold a flow of filtered fluid from said outlet;

pump means operatively interposed between said storage tank and said plurality of standpipes and selectively actuatable to deliver said cleaning fluid from said storage tank to said plurality of standpipes and through said nozzles into and through said filter screen.

12. A system according to claim 11 in which said stream of contaminated fluid flows at a rate of 1000 gallons per minute.

13. A system according to claim 11 in which said pump means delivers fluid to said central pipe at a rate of 50-80 gallons per minute.

14. A system according to claim 12 in which said pump means delivers fluid to said central pipe at a rate of 50-80 gallons per minute.

15. A system according to claim 11 in which a second pump means is operatively interposed between said contaminated fluid source and said inlet and selectively actuatable to deliver contaminated fluid from said source to said inlet.

16. A system according to claim 11 in which said filter frame comprises a plurality of spaced generally parallel ring members disposed about a common central axis and a plurality of elongated slat members, each of said slat members being mounted to the perimeter of said rings in spaced generally parallel relationship to each other.